

REMARKS

Reconsideration and allowance of the subject application are respectfully requested.

As a formal matter, Applicants respectfully request that the Examiner acknowledge consideration of the foreign patent documents cited in the Information Disclosure Statement filed on June 11, 2001. An initialed copy of the 1449 form is requested.

Claims 1-6, 9, 10, 14-23, 27, 28, 32, and 33 stand rejected under 35 U.S.C. §102(e) as being anticipated by U.S. Patent 6,208,620 to Sen et al. This rejection is respectfully traversed.

Sen relates to a system that carries a TCP connection over a wireless link. A TCP-aware agent sublayer (TAS) is introduced in a protocol stack for caching TCP packets and corresponding acknowledging packets. A link monitoring agent 211 (see Figure 2) monitors the condition of a wireless transmission channel (RLP 213) for the occurrence of a predefined fault. When the fault is an air link packet loss, the associated packet is immediately retransmitted from the cache. When the fault is a temporary disconnect, a congestion window of the TCP source is closed.

Sen fails to anticipate the independent claims. First, Sen does not describe video data or processing video data. The claims in this case all require video data processing.

Second, Sen's TAS is below the application layer. The claims recite "processing of video data at a first application layer" which is higher than the claimed second layer. The TAS layer 209 is clearly not Sen's application layer 221 (see Figure 2).

Third, there is no suggestion in Sen of video processing that includes "coding or transcoding of video data," as recited in the independent claims. Nor is such coding or transcoding done at the transport layer where the TAS is located.

Fourth, Sen's link condition feedback 212 is not used in the same way as claimed in the present application. The Sen reference teaches a specific mechanism for dealing with a problem that occurs on the level of the transport layer. Sen realizes that the loss of a packet or the loss of connectivity of the radio link severely impacts the TCP layer. Sen counteracts this by providing a specific sublayer (namely the TAS 209) and controlling this sublayer with the help of the link monitoring agent 211. In contrast, the claimed application layer directly processes video data including coding or transcoding the video data.

Fifth, coding or transcoding video data is not and could not be performed at the transport layer because the transport layer is not concerned with the contents of what is being transported. TAS 209 is not aware of any data transported in packets because the TAS 209 is *not* concerned with packet content, only with packet transport. This is why the element described in Sen is TCP-aware.

Sixth, the Sen reference specifically deals with TCP. But video streaming is typically not done over TCP because video streaming is delay-sensitive. In other words, an ARQ protocol like TCP is usually not suitable for video transmission. This is a further reason why objectively a skilled person would not consider applying the Sen's teachings to the processing of video data.

Applicants also traverse the obviousness rejection of claims 7 and 25 under 35 U.S.C. §103 based on Sen and the H.263 document. The H.263 document describes a feedback control loop in Figure 4, where the sending side receives feedback information derived from the decoded error rate at the receiver. So the H.263 reference only describes feedback at one layer (the application layer). As such, the H.263 reference does suggest the claimed feedback between a second lower layer and the first application layer.

Moreover, Sen and the H.263 reference objectively do not fit together as the Examiner proposes. Sen specifically deals with a problem at the transport layer, which has nothing to do with the considerations in the H.263 reference. When considering the TCP- related focus of the Sen reference, the person of ordinary skill would not consider video data. Sen proposes a scheme that improves the retransmission properties of a TCP connection when a wireless link is involved. However, retransmission is not desirable in connection with video streaming, due to its delay sensitivity.¹ Hence, there is no reasonable motivation (other than hindsight) to combine Sen with the H.263 reference.

Claims 13 and 31 stand rejected for obviousness based on the combination of Sen in view Li (U.S. 6,275,531). This rejection is respectfully traversed.

Claims 13 and 31 describe a system with at least two independent bitstreams of video data, and one of the bitstreams is selected on the basis of the derived video control values. In contrast, Li describes using a base layer and one or more enhancement layers. As a consequence, there is always a base layer present. Consequently, there is no teaching of selecting between two or more independent video streams.

Accordingly, the rejections should be withdrawn.

The application is in condition for allowance. An early notice to that effect is earnestly solicited.


¹ Although ARQ is possible in connection with video transmission, it is generally not desirable.

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Respectfully submitted,

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